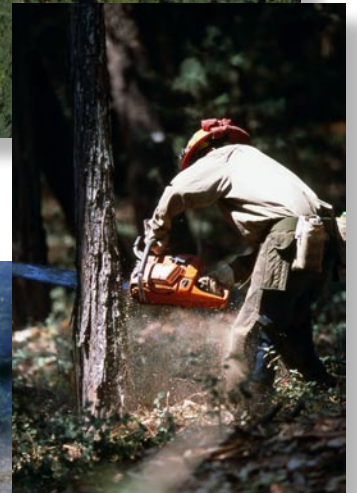




Hazard Mitigation Grant Program

Draft Vegetation Management Handbook A Guide for HMGP and PDM Grants



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Draft Vegetation Management Handbook

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Contributors

Mary Ann Hadden – Associate Environmental Planner-Principal Author

Dennis Castrillo – OES Environmental Officer – Contributor

John Rowden – State Hazard Mitigation Officer - Contributor

Marcia Rentschler- Program Manager HMGP - Contributor

Robert Eplett – OES Photographer

Vegetation Management Handbook- A Guide for HMGP and PDM Grants

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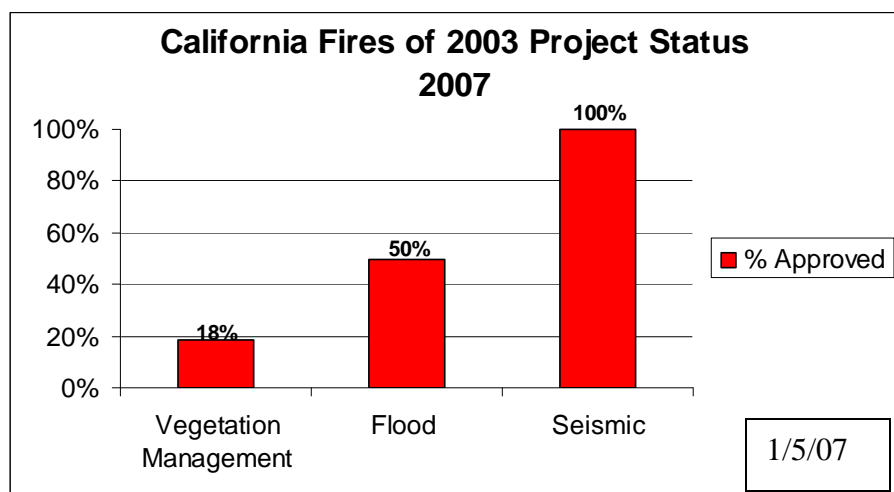
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Chapter 1 - Overview of Vegetation Management

This chapter discusses the importance of vegetation management and factors that have made fuel management important today. It also describes the methods of vegetation management and associated environmental impacts.

Purpose of the Handbook

Vegetation management projects can be effective in protecting structures from fires in the wildland/urban interface such as those that southern California experienced in 2003. While fire safety and emergency management officials recognize the role that vegetation management projects play in reducing fire risk, these projects can be delayed during the environmental and permitting process due to the environmental impacts they may create. The chart below shows three categories of mitigation projects for the California Fires of 2003 that involved construction. As shown on the chart, only 18 percent of the vegetation management projects have been approved as of January 2007. While these projects can be challenging, they are an important tool in mitigating the destructive forces of wildland fires. With careful planning, early coordination, and thorough application preparation, vegetation management projects can move through the review and approval process with less resistance.



This guidebook is intended to offer information and assistance to applicants interested in vegetation management programs funded through the Hazard Mitigation Grant Program (HMGP) or the Pre-Disaster Mitigation (PDM) grant program administered by the Governor's Office of Emergency Service (OES) and the Federal Emergency Management Agency

(FEMA). Specifically, this handbook will:

- Describe vegetation management techniques and their environmental impacts.
- Provide information on programs available from OES/FEMA to fund vegetation management projects.
- Provide examples of application materials which future applicants may find useful in preparing their submittal.
- Describe successful vegetation management projects (case studies) so that these projects can be used as models which other agencies may wish to emulate.

The Importance of Vegetation Management in California

California's unique climate and topography make the state vulnerable to wildfires. Population growth has resulted in intense competition for limited land resources. Development has extended

into rural areas as residents seek more affordable land and communities near open space and recreational areas. As a result, more California residents are living with wildfire risk.

Combustible Vegetation and Defensible Space

Combustible vegetation is any material left in its natural state that will readily ignite, burn and cause fire to move to any structure or other vegetation. This includes dry grass, brush, weeds, litter and waste. This does not include fire resistant landscaping.

Defensible space is the area around a structure where combustible vegetation that can spread fire has been cleared, reduced or replaced. This space acts as a barrier between a structure and an advancing fire and is a primary tool in protecting lives and property from the dangers of wild land fire.

Source: Fire, Defensible Space and You, San Diego County

These urbanization patterns also interfere with the natural processes, forcing the suppression of naturally occurring wildfires. Historically, controlled burning of brush and grass has been used to reduce the amount of fuel. However, as fuel loads increase, it is more difficult to safely use controlled or prescribed burning as a method of reducing hazardous fuel loads.

Air pollution regulations also make it difficult to use prescribed burning to reduce hazardous fuel loads.

Recognizing these limitations, communities are using a variety of methods to manage fuel loads.

Regulations have been adopted to address the problem of maintaining defensible space around residential areas. The maintenance of defensible space has several advantages. Defensible space creates fuel breaks which can stop a fire from progressing. Fuel reduction reduces the speed of fire, reduces the chance that structure fires will move to wildlands, and allows room for firefighters to more safely stage equipment and personnel.

Environmental Impacts of Managing Vegetation

There are several common practices used to remove vegetation fuel loads.

Each method has some adverse environmental impacts, some more than others.

Before considering a vegetation management program, think carefully about the area's natural characteristics, value of the structures you are protecting, level of effectiveness, maintenance requirements, potential environmental impacts, and whether there will be general support for your program.

Vegetation management can have direct effects on threatened and endangered plants that may be inadvertently damaged or removed. Removal of vegetation can affect the habitat of some animal species by removing cover that is required for the survival of those species. Although some plant and animal species may benefit from the general removal and thinning of vegetation, the loss of vegetation can fragment habitats.

Fuel reduction programs can disturb the reproduction of animal species. Removal of host plants required for the breeding of an insect species could impact survival. Timing of project tasks must be considered so that impacts to breeding are reduced.

Riparian habitats are particularly valuable as habitat because they provide corridors for the movement of species. Riparian plants also shade watercourses and cool the water for migratory fish.

They also provide protective cover for aquatic species. Mature established plants hold the soil in place, preventing the pollution of streams from soil erosion and sediments. For this reason, impacts to habitats are often minimized by avoiding areas near streams and watercourses unless there is a compelling reason.

Wildland areas can contain cultural resources such as archaeological sites, historic fences and walls, or historic buildings. Fuel reduction programs can damage cultural resources or expose them to the public, resulting in unauthorized collection of artifacts.

Most mechanical methods can result in noise and traffic disturbance at some level.

Prescribed Burning

Historically, wildfires were a natural occurrence in forests and chaparral. Natural fires create a mosaic pattern of burning that enhances the ecosystem and reduces the frequency of catastrophic fires. They also have the advantage of benefiting some plant species that require fire to propagate.

Prescribed or controlled burning can be used to effectively decrease fuel loads. The process can be carried out in such a way as to mimic the effects of natural wildfires. Prescribed burning is more difficult within the urban interface as it can and has caused property damage when conditions change and firefighters lose control. The practice of prescribed burning is mostly carried out in areas with higher acreages and lower human populations. It requires optimum weather conditions to be carried out safely and minimize impacts to air quality.

Prescribed burns must be approved by the local air quality agencies and can be difficult to permit depending upon the attainment status of the air basin. Areas that have been burned are viewed as visually unattractive, which can create controversy among residents. Prescribed burns will expose much of the ground surface, exposing cultural resources to the public. Burning of riparian areas can expose soils to wind and water erosion, which can affect water quality. Sensitive plant species must also be protected.

Clearing of staging areas for standby fire fighting equipment for prescribed burns can have environmental impacts by affecting listed species and causing soil erosion.

Chemical Treatment

The application of chemical herbicides to kill roadside vegetation is a common method of vegetation management. This practice reduces the ignitability of areas near the roadway, a common starting point for wildfires. Chemicals can have a negative impact on the environment if they enter the watershed and drinking water supplies. Herbicides can also have a toxic effect on wildlife populations. Sensitive plant species must be protected from overspray or they can be damaged or destroyed. Chemical spraying can also contribute to air emissions.

Mechanical Clearing

Mechanical clearing is the removal of vegetation through the use of heavy equipment. This includes the use of tractors and bulldozers to mow, disc, plow, bulldoze or rake to remove vegetation. It is particularly effective in removing large areas of vegetation to create a fire break or reduce flammable vegetation near roadways.

Although mechanical clearing is cost-effective, this method tends to have more adverse impacts on the environment than hand clearing. Heavy equipment can damage sensitive plants and contributes to soil compaction, disturbance, and erosion. Air quality is affected through the generation of dust from disturbed soil and by emissions from the engines. Soil disturbance from bulldozing and discing can also have an adverse impact on cultural resources that may be present on the ground and below the surface. Water quality can be adversely impacted by exposing disturbed soil to potential runoff. In addition, heavy equipment creates temporary noise impacts that can negatively affect neighbors or wildlife. Mechanical clearing results in vegetation that needs to be disposed of by burning, chipping, discing into the soil, or hauling to a landfill. Mechanical clearing can also have a negative visual impact.

Hand Clearing

Hand clearing is the removal of vegetation through the use of hand tools or small machine tools such as chain saws and weed whips.

This includes using chain saws to remove dead or selected live trees and pruning vegetation with hand pruning tools or axe loppers to remove limbs or thin shrubs. Push or power mowers can be used to remove grasses that contribute to fire risk.

Hand clearing has the least environmental impact of any other treatment method when crew members doing the work are properly trained. Although all vegetation removal processes can result in the loss of habitat, this process results in minimal ground disturbance with less impact on cultural resources. Hand clearing has less visual impact than other methods of clearing because the resulting appearance has a more natural look. It is easier to protect sensitive plant species using this method because it is very precise and individual plants can be easily examined before they are removed.

Hand clearing will result in slash that requires treatment that may have additional environmental impacts such as air pollution (burning) or noise (chipping). If slash is hauled from the cleared area it must usually be removed by hand, transported to a collection point and then hauled to a disposal site. This method of disposal can increase the amount of labor required.

Biological

The use of animals has emerged as an effective measure to thin or remove vegetation. Animals used for this purpose include sheep, goats, and cattle. Sheep and cattle prefer grasses and forbs while goats are effective in removing brush and understory plants. Because animals do not discriminate between plants, this method requires protective fencing of sensitive plant species. Non-treatment areas, especially riparian areas must also be protected and fenced to exclude animals. Animal waste



can pollute watersheds, and grazing and browsing animals can strip riparian vegetation, making more of the soil surface subject to erosion.

Animal grazing and browsing reduces the need for slash treatment and has less impact on cultural resources than mechanical clearing.

Regional Considerations

Most project descriptions for vegetation management plans will use a combination of techniques for reducing hazardous fuels. Because the climate and geography of California are so diverse, some treatment methods that are standard acceptable treatments in northern California may not be as acceptable in southern California.

In locations that do not meet air quality standards, prescribed burning may be more difficult to permit. Other local factors such as large stands of dead trees may make prescribed burning more hazardous. The drier conditions and potential for Santa Ana winds also increase the safety risks associated with prescribed burning. Southern California has more listed species, critical habitats, and land in Habitat Conservation Plans (HCPs) than northern California. The diversity of species with varying breeding seasons may reduce the duration that projects may be implemented.

These regional differences require the applicant to be aware of local environmental conditions before planning a project.

CHAPTER 2 - Hazard Mitigation Grant Programs

This chapter describes the hazard mitigation grant programs application process and ways to prepare effective grant application materials. In addition, this chapter includes a section about planning for hazard mitigation, including DMA 2000 Local Hazard Mitigation Plans and Community Wildfire Protection Plans.

FEMA Hazard Mitigation Grant Programs Available for Vegetation Management Projects

OES/FEMA offers two grant programs that can be used to fund cost-effective vegetation management projects:

The Pre-Disaster Mitigation (PDM) Grant Program

The Pre-Disaster Mitigation Grant Program assists States, Indian Tribal governments, and local governments with cost-effective hazard mitigation activities that complement a comprehensive mitigation program. The program provides applicants with an opportunity to raise risk awareness and reduce disaster losses before disasters strike through planning grants and project grants. PDM grants are awarded on a nationally competitive basis. Communities and States must have FEMA-approved mitigation plans in order to receive project grant funds.

The Hazard Mitigation Grant Program (HMGP)

Hazard Mitigation Grant Program funds are available following a Presidential disaster declaration. Eligible applicants include States, local governments, Indian Tribal governments, and some Private Non-Profit organizations. Communities may apply for HMGP assistance on behalf of affected individuals and businesses, and all funds must be used to reduce or eliminate losses from future disasters.

HMGP provides up to 15 percent of total Disaster Assistance funds for mitigation measures to be implemented during the immediate recovery after a disaster. Grant applications are submitted to the State, which sets mitigation priorities and awards grants based on available funding and State criteria. FEMA conducts the final eligibility review to ensure that all projects are compliant with federal regulations, including the federal law that requires states and communities to have FEMA-approved mitigation plans in place prior to receipt of HMGP project funds. A mitigation plan must identify hazards, assess community needs, and describe a community-wide strategy for reducing risks associated with natural disasters.

Duplication of Benefits

The HMGP provides an opportunity to fund measures that cannot be funded under other authorities. HMGP funds can be packaged with other funds, but are not intended to be used as a substitute for other available program authorities. Other programs and authorities should be examined before application to this program is made. Project applications that have been denied funding by other federal programs may be submitted for consideration by the HMGP. Specific regulations can be found in 44 CFR 204.62 (a).

Duplication of Programs

FEMA will not provide assistance for activities for which another federal agency has more specific or primary authority to provide assistance for the same purpose. In this case FEMA may disallow or recoup amounts that fall within another federal agency's jurisdiction. This would apply to National Fire Plan funded projects. In the past, FEMA has applied these regulations to any project within 1 ½ miles of federal land such as the National Park Service, National Forest Service, or Bureau of Land Management. In California these funds are pooled under the California Fire Safe Council. For this reason any treatment areas within 1½ miles of federal land should be identified in the grant application. Specific regulations can be found in 44 CFR 204.62 (b).

Grant Processes (HMGP and PDM)

Pre-Application/Notice of Interest (NOI)

If an applicant is interested in either program, the applicant must prepare a Notice of Interest (NOI). The NOI serves as a pre-application for funding. The NOI is examined by the OES to determine if it meets the basic eligibility and is consistent with the priorities of the PDM or HMGP program. Projects that meet the eligibility criteria but are not consistent with the program priorities may still be evaluated. However, these projects will be at a disadvantage when projects are ranked.

Formal Application

When a determination is made that a project meets the eligibility criteria, the applicant is requested to submit an application. The HMGP has a downloadable application that can be found at <http://www.oes.ca.gov>. The PDM program is processed through FEMA's Electronic Grants (eGrants) Management System. The eGrant system can be found at www.fema.gov. The application contains a checklist and requests information such as a project description and map. It is important that the application package be as complete as possible and all information requested is included. After this information is submitted, Hazard Mitigation (HM) staff will review the package and determine if it is complete. If information is missing or needs clarification, this information may be requested from the applicant. HM staff will review the project for inconsistencies in scope. An environmental review will not be conducted at this time.

Scoring and Submission to FEMA

OES reviews and recommends projects to FEMA based on scoring and ranking factors. Details about ranking and scoring are provided in program announcements at the time an application cycle begins.

Eligibility Evaluation and Environmental Review

When FEMA receives HMGP projects from OES, the eligibility and environmental review process begins. In some cases the applicant may be requested to submit additional information.

PDM projects are selected by a committee represented by FEMA and various states. When the PDM projects are selected, the FEMA environmental review process begins; however, the sub-applicant

should have completed significant environmental groundwork before submitting the application and should have submitted any supplemental information (e.g., CEQA documents, biological surveys) with the application.

Environmental review is initiated when a kickoff meeting is conducted with the applicant, FEMA, OES, and regulatory agencies to discuss the project and the proposed scope of work. This normally includes a site visit to the project location. Chapter 3 of this handbook describes this process in detail.

Obligation

Once FEMA determines the project meets the eligibility requirements and completes the environmental review process, grant funds can be obligated. Funds are disbursed on a reimbursement basis. The applicant must complete a form certifying expenditures to date. OES will reimburse costs on a 75% federal, 25% non-federal (local) cost share basis. Prior to commencing any work, the applicant has the responsibility of obtaining all of the necessary permits and completing the State environmental (CEQA) processes.

Environmental Information

When applicants apply for grant funds they are required to complete the grant application and provide certain information for OES to process the application. **This information provides the groundwork for the environmental documentation.** The environmental checklist, which is part of the application, must be as accurate as possible. Any information that can assist in the review of your project will help to expedite the process. If environmental documentation, such as CEQA documents or biological surveys has been completed, it should be included in the package. If the project information is incomplete, the review process will be stopped until FEMA receives the additional information. This occurs in more than half of the projects. **Providing complete and accurate information the first time is the best way to keep a project moving.**

Early Coordination

Most vegetation management projects in California will have listed endangered species and/or critical habitat issues. Early coordination will help design the project and develop a schedule to avoid impacts to listed species. Early coordination with National Marine Fisheries Service (NMFS) or US Army Corp of Engineers (USACE) may be helpful if the project will potentially impact watercourses.

Time and money spent on project descriptions and schedules without early coordination can be time and money wasted if application materials need to be revised or result in a complicated review process. It is advisable to include potential environmental mitigation costs in your grant proposal, particularly in the PDM program where additional money cannot be requested for cost overruns. However, environmental mitigation costs will affect the benefit-cost (BC) ratio for a project; therefore, avoidance of environmental impacts will benefit your BC ratio. Early coordination with the USACE is essential in PDM projects because permitting requirements can affect the design of the project.

The United States Fish and Wildlife Service (USFWS) website: <http://www.fws.gov/cno/es/default.cfm> can be accessed to retrieve species lists that identify which protected species occur in each county. To

ask for specific suggestions for avoidance or mitigation measures to eliminate or minimize impacts to listed species or habitats, contact the USFWS directly. Appendix B includes a map of USFWS field offices and corresponding contact information. In addition, there may be state-listed species to consider. Early discussions with California Department of Fish and Game can also help to reduce obstacles to project approval. Appendix C includes a map and contact numbers for the California Department of Fish and Game.

Planning for Hazard Mitigation

There are other programs and mechanisms to assist in determining areas of potential fire risk and evaluating that risk in order to focus mitigation efforts. Participation in these programs and coordinating the information gained can reduce the potential duplication of efforts when preparing HMGP and PDM grant applications. In addition, the preparation of a Local Hazard Mitigation Plan is required in order to receive HMGP and PDM grant funding.

Local Hazard Mitigation Plans (LHMP)

For each local jurisdiction in California, a FEMA-approved Local Hazard Mitigation Plan (LHMP) is required to receive grant funds for mitigation projects from the federal Hazard Mitigation Grant Program, the federal Pre-Disaster Mitigation Grant program, and other federal mitigation grant programs.

LHMPs shall contain:

- ✓ Documentation of the process used to develop the plan, including how it was prepared, who participated in the process, and how the public was involved.
- ✓ Description of the type, location, and extent of all natural hazards that can affect the jurisdiction. The plan shall include information on previous occurrences of hazard events and the probability of future hazard events.
- ✓ Risk assessment that provides the factual basis for activities proposed in the strategy to reduce losses from identified hazards. Risk assessments must provide sufficient information to enable the jurisdiction to identify and prioritize appropriate mitigation actions to reduce losses.
- ✓ Plan maintenance and a plan update and revision process.

Local governments must submit their completed draft LHMPs to the State Hazard Mitigation Officer at OES for initial review, comment and coordination. After review, OES will send the plan to the FEMA Region IX office for formal review and approval.

The areas of risk that are identified in the Local Hazard Mitigation Plan can be used to identify and prioritize locations for fuel reduction programs.

Community Wildfire Protection Plans (CWPP)

CWPPs are encouraged because they can help identify projects and build cooperative relationships with other agencies and the public.

Community Wildfire Protection Plans are authorized and defined in Title I of the Healthy Forest Restoration Act (HFRA) passed by Congress on November 21, 2003, and signed into law by President Bush on December 3, 2003. The minimum requirements for a CWPP are collaboration, prioritized fuel reduction, and treatment of structural ignitability. CWPPs can be instrumental in identifying

community wildland fire risks and developing alternatives for mitigation. The CWPP enables a community to plan how it will reduce the risk of wildfire. The plan identifies strategic sites and methods for fuel reduction projects across the landscape and jurisdictional boundaries. Projects that are identified in a CWPP receive National Fire Plan funding priority, which is a great benefit.

One important CWPP component is prioritization of fuel reduction. The CWPP must identify and prioritize areas for fuel reduction treatments and recommend the types and methods of treatments that will protect the community and essential infrastructure. An applicant can use the results of the CWPP to plan their vegetation management program. The collaboration component requires the community to consult with federal and state agencies and interested parties. This can help to build cooperative relationships that may be needed when processing your future HMGP or PDM grant applications.

A handbook has been developed by the National Association of State Foresters to assist agencies in developing a CWPP, called *Preparing a Community Wildfire Protection Plan, A Handbook for Wildland-Urban Interface Communities*. A link to the handbook is provided on the California Fire Alliance website <http://www.cafirealliance.org/>. You can also access it on the website of the National Association of State Foresters at <http://www.stateforesters.org/reports.html>. The California Fire Alliance has also created a template called CWPP Simplified Template also located at the California Fire Alliance website.

The CWPP can also be used to meet the requirements of the Local Hazard Mitigation Plan in identifying and planning for wildland fire risk.

Preparation of Application Materials

Critical Environmental Components of the Application

Project Description

The applicant must describe the project activities in detail. This should include the equipment and methods that will be used to remove vegetation as well as the location and timing of the events. For example:

- Will mechanized equipment be used or will tasks be accomplished using hand tools?
- Will the crews be trained to recognize listed species or minimize damage to critical habitat, or will a qualified biologist accompany the work crews?
- Will plants be removed by the roots or will they be pruned?

- Will all staging areas be in county roadways or will staging areas require the clearing of a new site?
- Will the project include the removal of exotic species?
- How will slash be handled?
- What is the time period for completing the project?
- Will the project be phased?
- Which plant species will be impacted?

These are important pieces of information that FEMA and permitting agencies will need to evaluate impacts to listed species and cultural resources.

Examples of good project descriptions are included in Appendix D. The examples were derived from environmental assessments and cultural resource surveys prepared by URS Corporation, a FEMA consultant. These are examples of project descriptions that have been greatly refined during the application process because they were prepared by FEMA consultants. However, subgrantees should try to emulate the level of detail in these project descriptions as closely as possible when submitting an application.

Project Map

Good project maps are critical. The project area must be described by three or more coordinates that identify its boundaries. The maps must identify any area of potential environmental, historic or archaeological impacts as well as service roads, staging areas, or off-site storage areas utilized during the construction of the project. The polygon created by connecting the coordinates must encompass the entire project area. The detailed project map must show all lat/long coordinates previously provided. All maps must have a north arrow and scale. In addition, all project boundaries should be within the subgrantee's jurisdiction or permission.

FEMA and their consultants use GIS shape files to determine how the project overlays with important environmental resources. Information regarding listed species, critical habitats, vegetation communities, species recovery areas, and habitat conservation plans are available in spatial formats allowing the reviewers to quickly see resources that may be affected by the project. This can help to expedite reviews with resource agencies.

Figures 1 and 2 are examples of good quality maps. Figure 1 is a map prepared by an applicant for an actual project. The map clearly shows the locations of specific project activities and staging areas. Areas with locked gates are shown, so that those who attend site visits can arrange for access. Figure 2 shows important details such as parcels that will be protected by treatments, vegetation types that will be affected and a linear measurement of the treatment areas. The map also has an insert to show the general location of the project site.

It is recommended that all project maps show, at a minimum:

- Areas of treatment in polygons or lines
- Linear measure or acreage measurement of treatment areas
- Location of staging areas
- Location of parcels if the project is to protect residential properties

Applicants who do not have the capability to prepare the maps may be able to request assistance from OES. This assistance is provided on a case-by-case basis. Call your OES representative regarding this assistance.

Work Schedule

Grant applications must include a detailed work schedule for carrying out the project. This is a very important component of the application because the timing of the project is important in evaluating the effects of the project on listed species. If information about listed species is available from early scoping with resource agencies, the work schedule can be designed to avoid or minimize impacts to listed species. If the treatment areas impact several listed species with different breeding seasons, this could significantly impact the project activity windows. An example of a work schedule is included in Appendix D. The sample schedule shows specific tasks that will be accomplished along with the months that they are scheduled over a three-year period.

Landfill Permits

Applications should include landfill permits for debris, especially for non-indigenous species such as *Arundo donax*, which many landfills refuse to accept.

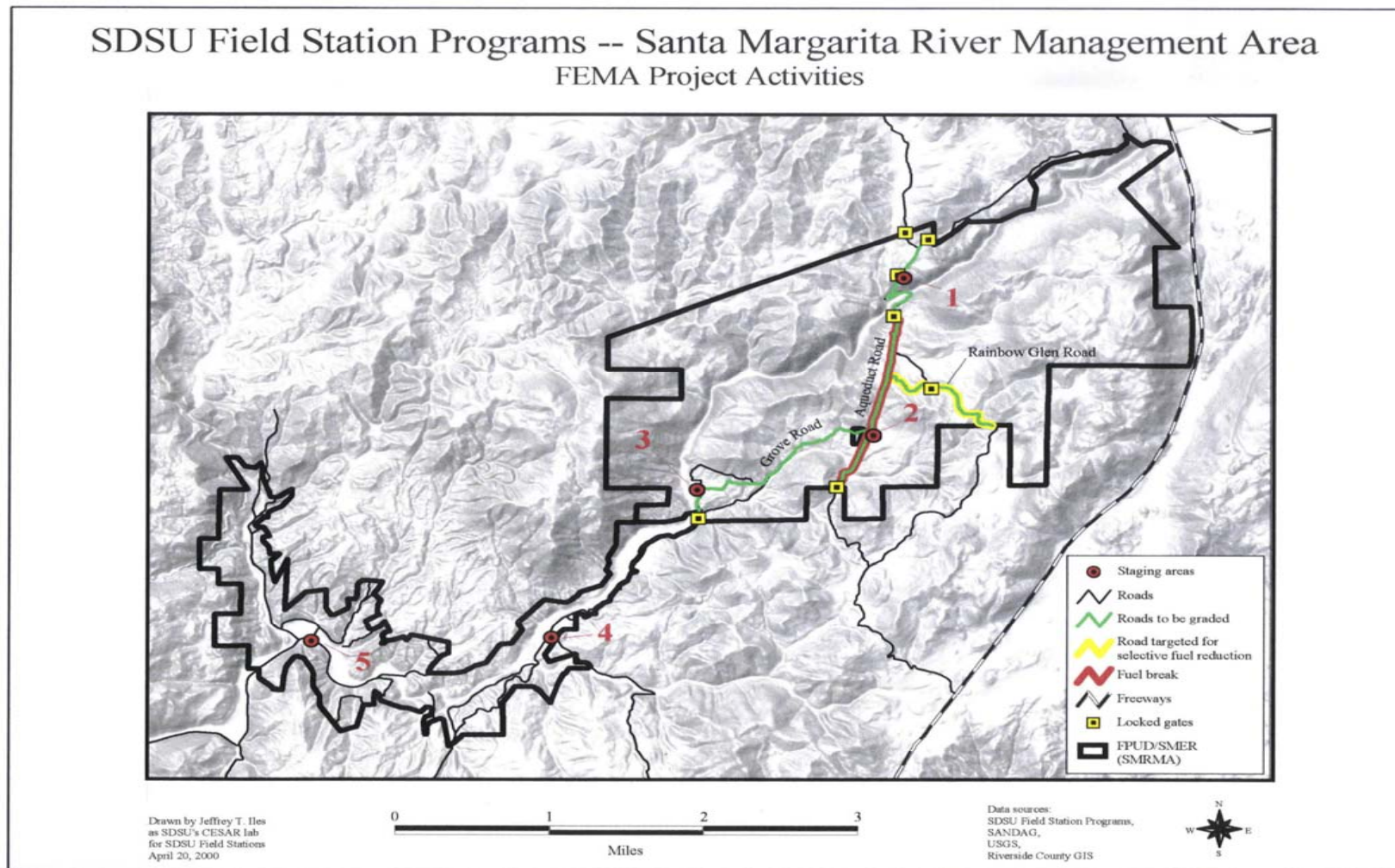


Figure 1 Example Map

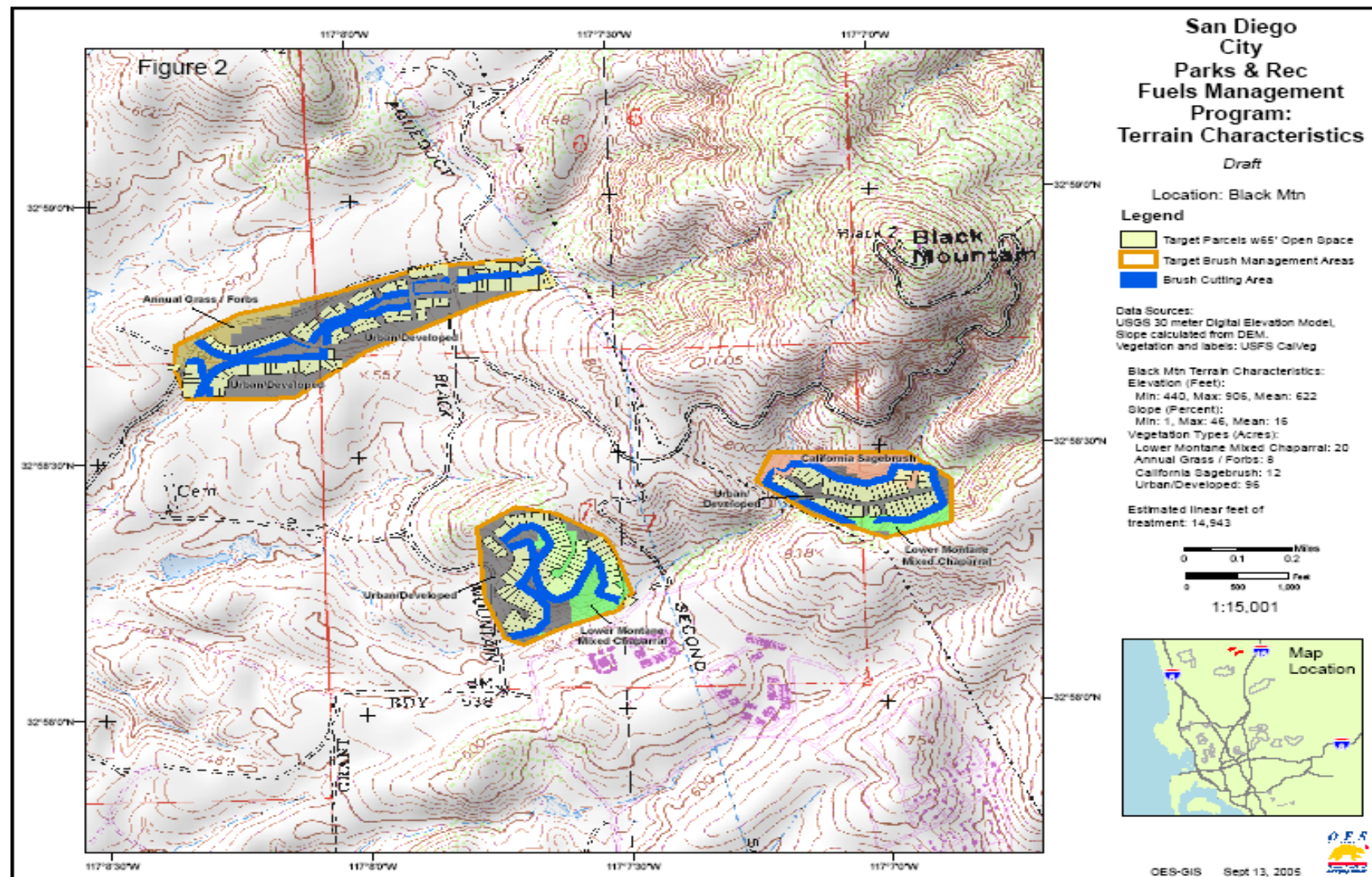


Figure 2 Example Map

Project Budget

The grant application must include a detailed project budget. In addition to project costs, the budget should include costs for anticipated environmental requirements such as mitigation or the cost of biological and archaeological monitors if required during the construction of the project. Permitting and CEQA compliance are also legitimate project expenses. Be as detailed as possible when describing mitigation and monitoring costs. Since FEMA will complete the required federal NEPA review process and any studies needed in the section 7 Endangered Species Act and section 106 of the National Historic Preservation Act consultations, grant funds should not be requested for these purposes.

Maintenance Program

Maintenance is an ineligible cost for federal reimbursement but a maintenance plan must be addressed in the application. Re-growth of vegetation will occur after the completion of the initial project, and the continuing success of the mitigation will be dependent upon the maintenance plan. Maintenance procedures may have additional environmental impacts that must be reviewed.

The maintenance plan should include:

- Frequency of inspection and relationship to growth cycle of vegetation treated.
- Methods of maintenance (hand crews, etc.).
- Schedule (e.g. in September or twice during the growing season).
- Debris disposal (especially of non-indigenous species such as *Arundo donax*).
- Environmental mitigation for endangered species or habitats and cultural resources.

If maintenance is to be shared by more than one entity, maintenance agreements for all entities must be submitted indicating relevant permissions and commitment to the maintenance plan.

Benefit-Cost Analysis (BCA)

The projects must be cost-effective in order to receive federal funding. This means that the project must have a benefit-cost ratio greater than 1, or the benefits received from the project must be higher than the cost. This is an important consideration in project planning because the cost of maintenance and any environmental costs need to be included in the “total project cost estimate” used for the BCA.

The costs of extensive environmental mitigation can significantly reduce the BC ratio of the project. Avoidance measures are best used in this case. For example, if certain plant species are removed or impacted by the project, mitigation may require replacement of those plants at a 2:1 ratio. This mitigation could result in costs significant enough to affect the BC ratio of the project. In this case it may be beneficial to exclude areas with these plants from the treatment areas.

For assistance with the BCA, call the OES Hazard Mitigation Branch at (916) 845-8150. You may also call the FEMA BCA helpline phone (866) 222-3580 or e-mail (bchelp@hhs.gov).

CHAPTER 3 - Environmental Review Process

This chapter describes the FEMA environmental review process and the federal and State environmental and historical laws that may be applied to a vegetation management project.

What to Expect From Environmental Review

There are many federal and State environmental and historical laws that can affect a project. Appendix A briefly summarizes these laws. Applicants are encouraged to review them so that they have a general understanding of the types of laws that could affect their project. While it's possible that many laws may come into play, recent experience has shown that there are nine primary laws that most frequently affect vegetation management projects. These are:

- National Environmental Policy Act (NEPA)
- Endangered Species Act (ESA) Section 7 Consultation
- National Historic Preservation Act (NHPA) Section 106 Consultation
- Fish and Wildlife Coordination Act
- Migratory Bird Act
- Clean Water Act
- Executive Order 11988 Flood Plain Management
- Executive Order 11990 Wetland Protection
- The California Environmental Quality Act (CEQA)

These laws and executive orders are discussed below.

National Environmental Policy Act (NEPA)

FEMA-funded projects are a federal action and, therefore, will be subject to NEPA review. NEPA requires that all federal agencies evaluate the effects of their actions upon the environment. Most likely, in the case of vegetation management projects, FEMA will prepare an environmental assessment or EA. FEMA has prepared a programmatic environmental assessment (PEA) for all current and future disasters in California. The PEA generally describes all of the environmental impacts that may be encountered for both hazard mitigation and public assistance projects. California's PEA can be viewed at <http://www.fema.gov/plan/ehp/envdocuments/ea-region9.shtm>. Most likely, vegetation management projects will be tiered from the PEA, and will require a supplemental environmental assessment (SEA). As its name implies, the SEA supplements the information in the PEA with more specific and detailed information about the project.

FEMA may assign the task of preparing the environmental document to a consulting firm. The consulting firm will prepare all the NEPA documentation including any studies needed to comply with other federal environmental laws. At the start of the environmental review process all interested parties are invited to a kick-off or scoping meeting. At this meeting FEMA, the applicant, FEMA's consultants, and OES will discuss the project details and any concerns about the project scope or potential environmental considerations. The applicant may be requested to provide additional information or provide additional details regarding their scope of work. Applicants should fully cooperate with these requests and provide information in a timely manner to ensure the process is completed expeditiously. If an environmental impact report (EIR) was prepared under CEQA for the project, this information should be provided to FEMA at this time.

Through the NEPA process, the environmental effects of the project will be analyzed, alternatives will be examined and compliance with various federal environmental laws will be determined. In recent history, vegetation management projects have completed NEPA using the SEA process rather than the more complex environmental impact statement (EIS) process. However, the SEA process can only take place if FEMA determines that any adverse impacts can be avoided or mitigated. If it is determined that the project will not have a significant impact on the environment, FEMA will prepare a FONSI or finding of no significant impact. Project activity may begin once FEMA sends a letter stating that FEMA approves the project scope of work, timeline, and budget, indicating that the environmental process is cleared and giving specific permission to begin. **Construction or vegetation management activities begun prior to receiving written notice that NEPA review has been cleared will jeopardize funding for this project.**

ESA, Section 7 Consultation

If federally listed species are present within your project area, a section 7 consultation may be required under the Endangered Species Act (ESA). The section 7 consultation can be formal or informal. The informal consultation is initiated when FEMA requests a species list from USFWS or NMFS. If species or their critical habitats are present and it is a minor activity, the parties may have an informal discussion (via phone, fax, or email) that may result in a “no effect” decision and the informal consultation will end with that conclusion. If it is determined that the project may affect a listed species or its critical habitats, FEMA and the consulting agency(ies) may informally agree to conditions to the project that would avoid or minimize any impacts so that a “not likely to affect” determination can be made.



Coastal California gnatcatcher

If the project is likely to affect the species or critical habitat a formal consultation is required. In this case, FEMA will request the initiation of a formal consultation by submitting a biological assessment (BA), which describes in detail the proposed action, the environmental setting, the special status species and the project’s potential effects on those species. If the information sent to USFWS or NMFS is incomplete, USFWS or NMFS has 30 days to notify FEMA. Once the package is complete, USFWS or NMFS has 90 days to formulate a biological opinion (BO). The BO includes a description of the action, information about the species, and terms and conditions (mitigation measures) to protect the species or its critical habitat from the proposed action. FEMA will have the opportunity to review the draft biological opinion before the final BO is delivered. This process has a 45 day timeline. This timeframe assumes that a complete package was sent to USFWS. Any additional information that needs to be submitted to USFWS can significantly affect the timeframe.

The ESA allows 135 days for a consultation, although the actual length of the consultation depends upon the staffing levels at USFWS, the thoroughness of the scope of work, and the completeness of information sent to USFWS. If the application materials are incomplete, the process could last for more than 135 days.

For further information about section 7 consultations, read the *Section 7 Consultation Handbook* at <http://www.fws.gov/endangered/consultations/s7hndbk/s7hndbk.htm>. The handbook describes, in detail, information that will be required for USFWS.

It is recommended that applicants review their scope of work to determine if any additional information needs to be provided when they meet with FEMA's consultants. Appendix D also includes examples of project descriptions.

ESA and Habitat Conservation Plans

Many public agencies are preparing Habitat Conservation Plans (HCP) in order to authorize "takes." under section 10 of the ESA. The ESA defines a take as: to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect listed animal species, or to attempt to engage in such conduct. Southern California, in particular, has large areas of land preserved under HCPs. Because a FEMA grant is a federal action, the HCP cannot substitute for a section 7 review under the ESA. On the other hand, if the applicant has been issued a take permit in conjunction with an HCP, the section 7 review process may be smoother. When planning the scope of work for the vegetation management project, applicants should read the conditions of the HCP and make sure the scope of work is consistent with those conditions. Your application should clearly state that this is the case and FEMA's environmental consultants should be made aware of these situations if they exist.

Projects that encroach upon HCP preserves may take longer to review as they can involve many listed species. Applicants should determine whether land in an HCP preserve needs to be included within a vegetation management project area and if lengthier project review periods are warranted.

National Historic Preservation Act, Section 106 Consultation

During the environmental review process, FEMA's environmental consultants will examine available databases and will request information from the applicant about significant cultural/historic resources in the area. FEMA's environmental consultants will walk the project area to determine if any cultural or historic resources could be affected and will prepare a written report of their findings called a cultural resource report. If it is determined that cultural resources may be affected, a consultation is required under section 106 of the National Historic Preservation Act. The consultation occurs among FEMA, the State Historic Preservation Office (SHPO), the Advisory Council, tribes and other interested parties. Many consultations can be completed within 30 days. The applicant may be asked for information that will assist in the consultation process. As mentioned before, good maps and project descriptions are important to this process.

FEMA and SHPO have a programmatic agreement (PA) in place to address cultural resource issues for hazard mitigation and public assistance projects. The PA defines roles and responsibilities and establishes time frames for when consultations must be completed.

Fish and Wildlife Coordination Act

The Fish and Wildlife Coordination Act ensures that wildlife conservation receives equal consideration and is coordinated with other features of water resource development programs. This requires the coordination of actions and projects with the U.S. Fish and Wildlife Service (USFWS) and the affected state fish and game agency. This consultation and coordination addresses ways to conserve wildlife resources by preventing loss of and damage to such resources, as well as to further develop and improve these resources. FEMA will take the lead under the Fish and Wildlife Coordination Act.

Migratory Bird Treaty Act of 1918

The Migratory Bird Treaty Act (USC 703-711) makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in 50 CFR Part 10, including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 CFR 21). Disturbance that causes nest abandonment and/or loss of reproductive effort may be considered a take and is potentially punishable by fines and/or imprisonment. If an action is determined to cause a potential take, a consultation process with the USFWS needs to be initiated to determine measures to minimize or avoid these impacts. FEMA will begin informal discussions with USFWS if a vegetation management product will potentially affect migratory birds. Scheduling work outside the nesting season may avoid impacts to migratory bird populations.

Clean Water Act

Section 404 of the Clean Water Act establishes a program to regulate the discharge of dredged and fill material into waters of the United States, including wetlands. Vegetation management projects implemented within watercourses and riparian areas may have impacts on wetlands and waters of the United States, especially if the project scope includes the use of mechanized measures. In this case permits may be needed from the Army Corps of Engineers. The applicant should contact the US Army Corps of Engineers (USACE) if their project will occur near watercourses or wetland areas.

Executive Order 11988 Floodplain Management and Executive Order 11990 Wetland Protection

If a project is located in a floodplain or includes wetlands, FEMA must also evaluate the project using a mandated “eight-step process.” Essentially, this process is used to determine if there are any practicable alternatives to the proposed project that avoid or minimize impacts to floodplains and wetlands. If the project is reviewed under these executive orders, a public notice will be required and published with the FONSI. Publication of the notice initiates the 15-day minimum review period.

The inclusion of riparian areas in vegetation management projects will probably create conflicts with the goals and objectives of the wildlife agencies. It also complicates the permitting process, as a Section 404 permit, water quality certification, and streambed alteration agreement will almost always be required.

For more information regarding these executive orders, see Chapter 44 of the Code of Federal Regulations, Part 9.

California Environmental Quality Act (CEQA)

The applicant will be responsible for carrying out the project and, therefore, will be considered the lead agency under CEQA. As the lead agency, you will be required to prepare any environmental documents and procedural paperwork required for the project prior to commencing active vegetation management activities.

It is the applicant's responsibility to determine the type of documentation that will be required. This will depend on the size and complexity of the project as well as the significance of the environmental impacts. The following is a list of CEQA compliance methods.

Exemptions

The project should first be reviewed to determine if it is exempt from CEQA. CEQA has a categorical exemption that applies specifically to some vegetation management projects. The exemption can be found in Article 19, Section 15304, Class 4 (i) of the CEQA guidelines. The CEQA guidelines can be viewed at the CERES website at <http://www.ceres.ca.gov>. The text of the exemption is below. It is important to understand that the exemption cannot be applied if the project will impact threatened or endangered species or water quality.

Fuel management activities within 30 feet of structures to reduce the volume of flammable vegetation, provided that the activities will not result in the taking of endangered, rare, or threatened plant or animal species or significant erosion and sedimentation of surface waters. This exemption shall apply to fuel management activities within 100 feet of a structure if the public agency having fire protection responsibility for the area has determined that 100 feet of fuel clearance is required due to extra hazardous fire conditions.

Note: Authority cited: Section 21083, Public Resources Code; Reference: Section 21084, Public Resources Code.

If a lead agency determines that a project is exempt, a copy of the exemption should be filed with the county clerk for 30 days when the process is followed. When this process is followed, the statute of limitations on legal challenges is 35 days.

Negative Declarations

If a project is not CEQA exempt, an initial study will be prepared to determine the type and magnitude of environmental impacts. A negative declaration is prepared if the initial study determines that the project will not have a significant effect on the environment. If there are environmental impacts that can be minimized or reduced by mitigation measures, a mitigated negative declaration must be prepared. The required contents and the required process to prepare

and adopt negative or mitigated negative declarations can be found in Article 6, section 15071 of the CEQA guidelines.

Environmental Impact Report (EIR)

If it is determined that the project will result in significant effects to the environment, an environmental impact report or EIR must be prepared to fully explore and disclose the environmental impacts.

The EIR process can be complex; an EIR can be costly and take months to prepare, review, and adopt. If possible, applicants pursuing vegetation management projects should do all they can to avoid or minimize environmental impacts. We suggest discussing how to comply with a legal advisor and/or environmental management office if an EIR becomes necessary.

Using NEPA Documents to Satisfy CEQA

Applicants who need to prepare a CEQA environmental document, other than an exemption, should contact FEMA to coordinate the effort. The EA can serve to satisfy CEQA requirements and can be circulated to do so. Please check with your own legal advisor or environmental review staff on how this can be accomplished. CEQA guidelines may be reviewed at <http://www.ceres.ca.gov>.

CEQA Timing

Because the Office of Planning and Research (OPR) added a CEQA exemption specifically for the compliance of defensible space regulations, most projects are likely to be exempt from CEQA. In a review of 33 vegetation management projects by State agencies that were submitted to the State Clearinghouse from January 2005 through July 2006, 32 of those projects were categorically exempt from CEQA. This exemption can only be used if the project does not result in the taking of listed species. It may be to your advantage to postpone CEQA compliance until after the NEPA review is complete for the following reasons:

- If USFWS issues a biological opinion (BO), or at the conclusion of the NEPA review determines that there is no effect on listed species, a CEQA exemption can be applied to the project. It would not be prudent to spend time on unnecessary environmental documentation if an exemption can be issued.
- If you need to prepare a negative declaration, mitigated negative declaration or an EIR, much of the information developed in the NEPA EA can be used to prepare those documents.
- It is preferable to postpone CEQA documents until NEPA is complete, as FEMA will require the evaluation of an additional alternative(s). The alternative studied in the NEPA document could ultimately be selected as the preferred scope of work since it could result in fewer environmental impacts.

Of course, there may be good reasons to pursue the completion of CEQA on a parallel track with the NEPA documentation due to specific situations, so each applicant should determine how they wish to proceed.

Permitting

The subgrantee is responsible for obtaining all of the required permits for the project. Starting the project before obtaining required permits could result in the loss of grant funds. Potential permits for vegetation management projects are listed below.

Air Permits

An air permit will be required if prescribed burning or burning of slash is part of the project activities. In California, the federal Clean Air Act is administered through an integrated state and local effort. For implementing prescribed burns, the state issues the *State Smoke Management Guidelines*, adopted by the California Air Resources Board (ARB). These guidelines provide a framework for managing air quality impacts resulting from prescribed burns. Additionally, individual local air districts implement and enforce local rules and regulations. The *Smoke Management Guidelines* require agencies to consider alternatives to burning in planning their fuel reduction programs.

When alternatives to prescribed burning are not feasible, and burning is the only option, the applicant must follow the steps listed below:

- Register their burn with the local air district
- Obtain an air district and/or fire agency burn permit
- Submit a smoke management plan (SMP) to the air district
- Obtain air district approval of the SMP. The SMP specifies the “smoke prescription,” which is a set of air quality, meteorological, and fuel conditions needed before burn ignition is allowed

The applicant will be required to submit detailed information regarding their burn and provide public notice.

Air pollution from fugitive dust and mechanized equipment is also regulated under the Clean Air Act and administered by local air agencies. Applicants must control dust and emissions if they should occur. Appendix E lists contact and jurisdictional information for air quality compliance.

Clean Water Act Section 404

Any work that may require the deposition of fill in more than ½ acre of wetlands or below the high water mark within the waters of the United States may require a permit with the US Army Corps of Engineers (USACE). Subgrantees should contact the USACE if the project scope includes areas within watercourses or possible wetlands. Failure to acquire a USACE permit may result in the loss of grant funds.

Clean Water Act Section 401 (Water Quality Certification)

If a USACE permit is required for the project, the subgrantee will be responsible for obtaining a Water Quality Certification or Waiver from the Regional Board. Failure to acquire Water Quality Certification from the Regional Board may result in the loss of grant funds.

Section 1600 of the Fish and Game Code

Work in a stream or lakebed or the removal of riparian habitat will require notification to California Department of Fish and Game and can result in a Streambed Alteration Agreement.

Landfill Permits

Landfill permits may be required if forest slash will be disposed of in landfills.

CHAPTER 4 - Case Studies

This chapter describes two vegetation management projects that were successfully carried out through FEMA grant programs.

Case Studies

Empire Mine State Historic Park - Shaded Fuelbreak

Empire Mine State Historic Park (Park) is located in Nevada County adjacent to the city of Grass Valley. Nevada County is a rapidly urbanizing area. Several large parcels surrounding the Park were scheduled for residential development. Several older homes and commercial developments were located within five to ten feet of the park fence.

The public was very concerned about the buildup of combustible vegetation within the Park. The Park staff proposed a scope of work that included the hand removal of vegetation followed by prescribed burning. The public was sensitive to visual impacts from mechanical removal methods resulting in the choice of hand removal. Fuels would be chipped and spread into the soil or burned if the air quality conditions were good.

The project coordinated support from State Parks, CDF and the Northern Sierra Air Quality Management District before the application for the grant from FEMA was submitted. Each agency agreed to support prescribed burns within the Park and address smoke management within Grass Valley and Nevada City. Biological surveys and environmental documents regarding the project were prepared in advance and forwarded to FEMA.

The project was planned over three phases covering a three year period. Hand drawn maps of each phase were prepared that accurately displayed the treatment areas.

Factors Contributing to the Success of the Project

This project was successful because input from impacted neighbors was sought and the scope of work was adjusted to accommodate their concerns. Regulatory agencies were also contacted before the scope of work was prepared so that a feasible project was developed that could be approved. The Park's staff also did substantial work ahead of time by preparing a biological survey and other environmental documents and forwarding the information to FEMA.

San Diego State University - Santa Margarita River Management Area

San Diego State University maintains a natural area called the Santa Margarita River Management Area. The University was concerned that vegetation in the management area had become overgrown and was a risk to residential areas that were developing around the reserve. In addition, the increase in human activities around the reserve posed additional risk that fire could be introduced. The University spent considerable time and effort in planning the project and creating an atmosphere of cooperation with the public and several cooperating agencies in determining the proposed scope of work.

The University was aware of the many listed species that occurred in the management area and had completed a study to determine how the project would affect those species.

The University considers the project a success. The project was extensively planned. The University was able to form a committee composed of various agencies and interest groups with competing interests. The committee assisted in planning the project to develop a scope of work that met the objectives of fire hazard reduction while protecting the interests of stake holders. For example, the Fallbrook PUD was concerned about the effects of the project on the watershed that was integral to their water supply facilities. As a result, the University agreed to protect riparian resources. The project scope included water supply facilities and road improvements to assist the fire district. The fire district was satisfied that additional resources were added to the project to assist in the fire fighting efforts. Environmental groups felt that the listed species were being protected. The University was also able to protect critical areas of the facility where they were conducting ecological research. Neighbors bordering the natural areas felt more secure from the threat of wildland fire.

The planning effort also resulted in the development of good maps and clear project descriptions that enabled an efficient environmental review.

Factors Contributing to the Success of the Project

The University had substantial resources to offer to the project by utilizing their own staff to do preliminary work and prepare maps of the project site. They solicited input from regulatory agencies and the public who had concerns about the project and prepared the scope of work to avoid conflicts. The University also agreed to avoid riparian areas, which avoided impacts to water quality and aquatic and riparian species.

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Appendix A

Federal Environmental/Historical Laws and Executive Orders That May Affect Vegetation Management Projects

Federal Environmental/Historical Laws and Executive Orders That May Affect Vegetation Management Projects

There are many federal laws that apply to the protection of environmental resources. For the purposes of this handbook, the laws that are most likely to be encountered in vegetation management are addressed below.

National Environmental Policy Act of 1969 (NEPA)

Purpose of NEPA

National Charter for Protecting the Environment - NEPA establishes environmental policy for the nation. It provides an interdisciplinary framework for federal agencies to prevent environmental damage and contains action-forcing procedures to ensure that environmental considerations are taken into account.

Ensures that Environment is Considered - Requires that federal agencies consider the effects of their proposed actions and alternatives on the human environment before deciding to fund and implement the action. Nearly all actions proposed by a federal agency are subject to the process required by NEPA, including any action carried out using FEMA funds. The process required under NEPA increases the quality of decisions by requiring a full understanding of the impacts and obtaining input from a range of stake holders. Emergency exceptions are made when the proposed action is the only means to ensure the immediate health and safety of people. The law requires a decision making process and not a specific outcome, making it the National Environmental POLICY Act and not PROTECTION Act.

Sec. 102: "The Congress authorizes and directs that: (2) all agencies of the Federal Government shall- (A) Utilize a systematic, interdisciplinary approach which will insure the integrated use of the natural and social sciences and the environmental design arts in planning and in decision making which may have an impact on man's environment :"

". . (C) Include in every recommendation or report on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment, a detailed statement by the responsible official on (I) The environmental impact of the proposed action, (ii) Any adverse environmental effects which cannot be avoided should the proposal be implemented, (iii) alternatives to the proposed action, (iv) The relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity, and (v) Any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented.

From a 1989 U.S. Supreme Court NEPA case (Roberston v. Methow Valley Citizen's Council): *NEPA itself does not impose substantive duties mandating particular results but simply prescribes the necessary process for preventing uninformed - rather than unwise – agency action . . . If the adverse environmental effects of the proposed action are adequately identified and evaluated, the agency is not constrained by NEPA from deciding that other values outweigh the environmental costs.*

"Human Environment" - A comprehensive phrase that includes the natural and physical environments and the relationship of people with those environments. Social and economic effects

are not, by themselves, intended to require preparation of an environmental impact statement (EIS), the highest and most extensive level of NEPA review.

Ensures Public Involvement - Environmental information must be available to public officials and citizens before agency decisions are made and before actions are taken.

What does NEPA apply to?

The law states that major federal actions significantly affecting the environment are subject to review. Practically all federal actions are subject to NEPA review. The NEPA implementation process, discussed in Chapter 2, is the method for determining which actions are major actions significantly affecting the environment. Federal actions can take the form of adoption of official policies, rules, and regulations; adoption of plans; adoption of programs; and approval of specific projects, including private undertakings approved by agency permit or regulatory decision.

- **Federal Funding** - Such as grant awards or funding programs. Includes activities used as a nonfederal match to federal funding. No minimum amount.
- **Federal Permits** - Such as Section 404 of the Clean Water Act, Wetlands permit, issued by Army Corps of Engineers.
- **Facilities and Equipment** - Such as new buildings proposed for a FEMA facility.
- **Agency Rulemaking** - Such as promulgating regulations that affect land development, such as National Flood Insurance Program regulations.
- **Federal Lands** - Doesn't typically apply to FEMA projects except for activities at NETC and Mt. Weather. Typical federal land uses triggering NEPA include timber harvesting, mining, grazing, transmission corridor projects (electrical, gas, oil, etc.), or building construction.
(Source: FEMA EHP Desk Reference)

Endangered Species Act (ESA)

The purpose of the Endangered Species Act is to conserve ecosystems on which endangered and threatened species depend and to conserve and recover listed species. Section 7 of the ESA requires that federal agencies consult with US Fish and Wildlife Service and/or NOAA Fisheries when their actions affect endangered, threatened, candidate species and species of concern. A consultation will also be required if the project area is within designated critical habitat. FEMA will be responsible for the section 7 consultation. This procedure is discussed in more detail later in this document.

Section 106 of National Historic Preservation Act (NHPA)

Section 106 of NHPA granted legal status to historic preservation in federal planning, decisionmaking, and project execution. Section 106 requires all federal agencies to take into account the effects of their actions on historic properties and to provide the Advisory County on Historic

Preservation (ACHP) with a reasonable opportunity to comment on those actions and the manner in which federal agencies are taking historic properties into account in their decisions.

If the project site contains cultural resources or is near cultural resources, the project may be subject to the National Historic Preservation Act (NHPA). Cultural resources may include historic structures such as buildings, fences, walls or other structures or archaeological artifacts on or below the ground.

The State Historic Preservation Office (SHPO) is responsible for protecting the cultural resources of the state and administers the National Historic Preservation Act in California.

American Indian Religious Freedom Act

The American Indian Religious Freedom Act protects and preserves for Native Americans their inherent right of freedom to believe, express, and exercise their traditional religions, including but not limited to access to sites, use and possession of sacred objects, and the freedom to worship through ceremonials and traditional rites.

Clean Air Act

Although the Clean Air Act is a federal law covering the entire country, the states do much of the work to carry out the Act.

In the Clean Air Act, the USEPA sets limits on how much of a pollutant can be in the air anywhere in the United States. This ensures that all Americans have the same basic health and environmental protections. The law allows individual states to have stronger pollution controls, but states are not allowed to have weaker pollution controls than those set for the whole country. California has more stringent requirements for most pollutants than the federal standards.

In California, the federal Clean Air Act is administered through an integrated state and local effort. For implementing prescribed burns, the state issues the *State Smoke Management Guidelines*, adopted by the California Air Resources Board. These guidelines provide a framework for managing air quality impacts resulting from prescribed burns. Additionally, individual local air districts implement and enforce local rules and regulations. The *Smoke Management Guidelines* require agencies to consider alternatives to burning in planning their fuel reduction programs; however, when alternatives to prescribed burning are not feasible burning may be the only option. The applicant must follow the steps listed below in order to permit the prescribed burn.

- Register their burn with the local air district
- Obtain an air district and/or fire agency burn permit
- Submit a smoke management plan (SMP) to the air district
- Obtain air district approval of the SMP. The SMP specifies the “smoke prescription,” which is a set of air quality, meteorological, and fuel conditions needed before burn ignition may be allowed.

The applicant will be required to submit detailed information regarding their burn and provide public notice.

Air pollution from fugitive dust and mechanized equipment is also regulated under the Clean Air Act and administered by local air agencies. Applicants must control dust and emissions if they occur.

Clean Water Act Section 404

Section 404 of the Clean Water Act established a regulatory program for the disposal of dredged or fill materials in the waters and wetlands of the United States. Vegetation clearing actions within a watercourse may require a permit from the Army Corps of Engineers if the action results in the dredging or filling of the waters of the United States or if wetlands are impacted. This is most likely to result from the use of mechanized equipment in or near a water course.

Clean Water Act Section 401

Section 401 of the Clean Water Act gives states the authority to veto or place conditions on federally permitted activities that may result in water pollution. Section 401 requires that any applicant for a federal permit or license that may result in a discharge to waters of the United States must first obtain certification from the state.

In California, Section 401 of the Clean Water Act is regulated by nine Regional Water Quality Control Boards that establish water quality standards for the State of California by basin. Any actions that fall under Section 404 of the Clean Water Act will also require a Water Quality Certification or Waiver from the Regional Board with jurisdiction over the project. Requirements may differ among Board jurisdictions as water quality standards vary by basin.

Executive Order 11988 Flood Plain Management

Under Executive Order 11988 Flood Plain Management, federal agencies are required to evaluate impacts to flood plains for any action they are funding. If a federally funded project takes place within the 100-year flood zone, an evaluation will be required to study the impacts to the flood plain. This evaluation will take place in an eight-step process that will likely occur during the NEPA environmental review. FEMA cannot fund a project in the 100-year flood plain unless there is no practicable alternative. The executive order requires public input into the process.

Executive Order 11990 Protection of Wetlands

This executive order requires an evaluation of impacts on wetlands if the project activities take place within a wetland as defined in the executive order. Evaluation under Executive Order 11990 will also follow the same eight-step process as Flood Plain Management. If the project affects both floodplains and wetlands, both executive orders will be evaluated together during the NEPA environmental review. Executive Order 11990 also requires public input into the process.

Coastal Zone Management Act

In recognition of the increasing pressures of over-development upon the nation's coastal resources, Congress enacted the Coastal Zone Management Act (CZMA) in 1972. The CZMA encourages states to preserve, protect, develop, and, where possible, restore or enhance valuable natural coastal resources such as wetlands, floodplains, estuaries, beaches, dunes, barrier islands, and coral reefs, as well as the fish and wildlife using those habitats.

If project activities take place within the coastal zone the project will be subject to the Coastal Zone Management Act. In California, the Coastal Zone Management Act is implemented by the California Coastal Commission. The activities must be consistent with the certified California Coastal Management Program.

Wild and Scenic Rivers Act

The Wild and Scenic Rivers Act established a method for providing federal protection for certain remaining free-flowing rivers, preserving them and their immediate environments for the use and enjoyment of present and future generations. Rivers in the system benefit from the protective management and control of development which the Act provides.

Any activities that impact designated rivers require coordination with the National Park Service or another managing agency.

The Noise Control Act

The Noise Control Act required the US USEPA to develop noise level guidelines to protect the public from the impacts of environmental noise and make recommendations on noise limits. As a result, USEPA determined that levels exceeding 55 decibels are unacceptable for noise sensitive populations including residential areas and hospitals.

If project activities occur within or near residential areas, mitigation for noise impacts may require timing of activities in terms of time of day and length of time noise-producing activities may take place.

Executive Order 12898 Environmental Justice

The Environmental Justice Executive Order was introduced in 1994 and directed every federal agency to make environmental justice part of its mission by identifying and addressing the effects of all programs, policies, and activities on "minority populations and low-income populations." Federal agencies are required to correct actions or policies that have a disproportionate effect on low income or minority communities.

Although it is unlikely that a vegetation management project could have an adverse impact on minority or low income populations, federal agencies must consider this possibility when determining the issues that their environmental document must address.

State Environmental Laws That May Affect Vegetation Management Projects

The California Environmental Quality Act (CEQA)

The California Environmental Quality Act (CEQA) is California's most important and comprehensive environmental law. CEQA requires state and local agencies to assess the environmental effects of projects they intend to construct or permit and to consider these effects in their decision-making. CEQA is implemented by the preparation of environmental documents including EIRs, mitigated negative declarations, and negative declarations.

The process is similar to the NEPA process except that the applicant or the applicant's consultants will be preparing the documents and will have full responsibility for compliance. Although both NEPA and CEQA documents will be prepared, information from those documents can be shared to expedite the process. FEMA requires that CEQA compliance be completed before the project can be constructed. It is the subgrantee's responsibility to comply with CEQA.

The California Endangered Species Act (CESA)

The California Endangered Species Act (CESA) states that all native species of fishes, amphibians, reptiles, birds, mammals, invertebrates, and plants, and their habitats, threatened with extinction and those experiencing a significant decline which, if not halted, would lead to a threatened or endangered designation, will be protected or preserved.

Section 2080 of the Fish and Game Code prohibits "take" of any species that the commission determines to be an endangered species or a threatened species. Take is defined in Section 86 of the Fish and Game Code as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill."

However, CESA also allows for incidental take for lawful development projects. CESA encourages early consultation to avoid potential impacts to rare, endangered, and threatened species and to develop appropriate mitigation planning to offset project-caused losses of listed species populations and their essential habitats.

The applicant will have the responsibility for compliance with the CESA. The CESA is administered by the California Department of Fish and Game (DFG). DFG is a Trustee Agency under CEQA because they are responsible for the protection of California's biological resources. DFG is also a responsible agency under CEQA and must rely on the lead agency's CEQA document prepared for the project to make a finding and decide whether or not to issue an incidental take permit.

Section 1600 of the Fish and Game Code

The Department of Fish and Game is responsible for conserving, protecting, and managing California's fish, wildlife, and native plant resources. If a project requires work in a lake or a stream or removal of riparian habitat adjacent to a lake or a stream, the project could have an adverse impact on fish and wildlife. Section 1600 of the Fish and Game Code requires the applicant to notify the California Department of Fish and Game before starting the work. If the department

determines that the activity will have an adverse impact, a Streambed Alteration Agreement will be required.

California Native American Graves and Repatriation Act (NAGPRA)

The California Native American Graves and Repatriation Act strives to ensure that all California Indian human remains and cultural items are treated with dignity and respect. It encourages voluntary disclosure and return of remains and cultural items by publicly funded agencies and museums in California.

California NAGPRA rules are found in the California Health and Safety Code (5097.9). California NAGPRA establishes a state repatriation policy intent that is consistent with and facilitates implementation of the federal Native American Graves Protection and Repatriation Act.

California Public Resources Code 5097.9

California Public Resources Code 5097.9 states that no public agency, and no private party using or occupying public property, or operating on public property, under a public license, permit, grant, lease, or contract made on or after July 1, 1977, shall in any manner whatsoever interfere with the free expression or exercise of Native American religion as provided in the United States Constitution and the California Constitution; nor shall any such agency or party cause severe or irreparable damage to any Native American sanctified cemetery, place of worship, religious or ceremonial site, or sacred shrine located on public property, except on a clear and convincing showing that the public interest and necessity so require.

California Clean Air Act (CCAA)

The California Clean Air Act has established California Ambient Air Quality Standards. California's standards are generally more stringent than the National Ambient Air Quality Standards promulgated by USEPA. Air quality standards in California are regulated at the local level by the 15 air basins throughout the state. Each air district sets its own limits for stationary sources and has its own requirements for managing air quality.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act is the principal law governing water quality regulation in California. This statute established the State Water Resources Control Board (SWRCB). The Porter-Cologne Water Quality Control Act also created nine Regional Water Quality Control Boards (RWQCB) that implement its provisions. Porter-Cologne establishes a comprehensive program for the protection of water quality and the beneficial uses of water. It applies to surface waters, wetlands, and ground water and to both point and nonpoint sources. Porter-Cologne is found in the California Water Code beginning with Section 1300. In addition, Title 23 of the California Code of Regulations (CCR) contains administrative and regulatory elements of water quality and quantity management in California.

California Coastal Act of 1976

The California Coastal Act of 1976 implements the federally approved coastal management plan for California. The state has two coastal management agencies. The California Coastal Commission regulates the coastal zone from within a few feet of the coastline to five miles inland depending on the location. The San Francisco Bay Conservation and Development Commission has authority within the San Francisco Bay. Discretionary projects within the coastal zone will require a coastal permit from the regulatory agency responsible for that section of the coastal zone.

Appendix B

Fish and Wildlife Field Office Location and Contact Information

Fish and Wildlife Field Office Location and Contact Information



Arcata Field Office
1655 Heindon Road
Arcata, CA 95501
707-822-7201
<http://www.fws.gov/cno/arcata>

Sacramento Field Office
2800 Cottage Way # W-2605
Sacramento, CA 95825
916-414-6600
<http://www.fws.gov/sacramento>

Carlsbad Field Office
2730 Loker Avenue West
Carlsbad, CA 92069
460-431-9440
<http://carlsbad.fws.gov>

Ventura Field Office
2493 Portola Road #B
Ventura, CA 93003
805-644-1766
<http://www.fws.gov/ventura.fws.gov>

Klamath Falls Field Office
6610 Washburn Way
Klamath Falls, OR 97603
541-527-3043
<http://klamathfallsfwo.fws.gov>

USFWS Sub Offices
Barstow – 760-255-8852
Stockton – 209-947-6400

Appendix C

California Department of Fish and Game Office Locations and Contacts

California Department of Fish and Game Office Locations and Contacts



North Coast Region 1 601 Locust Street Redding, CA 96001 530-225-2363	Del Norte, Humboldt, Lassen, Modoc, Shasta, Siskiyou, Tehama and Trinity counties
Sacramento Valley – Central Sierra Region 2 1701 Nimbus Road Rancho Cordova, CA 95670 916-358-2912	Alpine, Amador, Butte, Calaveras, Colusa, El Dorado, Glenn, Nevada, Placer, Plumas, Sacramento, San Joaquin, Sierra, Solano, Sutter, Yolo and Yuba counties
Central Coast Region 3 7329 Silverado Trail Napa, CA 94558 707-994-5500	Alameda, Contra Costa, Lake, Marin, Mendocino, Monterey, Napa, San Benito, San Luis Obispo, San Mateo, Santa Clara, Santa Cruz, San Francisco, Sonoma, and Solano counties
San Joaquin Valley Region 4 1234 Shaw Avenue Fresno, CA 93710 559-234-4005 Ext. 151	Fresno, Kern, Kings, Madera, Mariposa, Merced, Stanislaus, Tulare, and Toulumne counties
South Coast Region 5 4949 Viewridge Avenue San Diego, CA 92123 858-467-4201	Los Angeles, Orange, San Diego, Santa Barbara, and Ventura counties
Eastern Sierra and Inland Deserts Region 6 330 Golden Shore, Suite 250 Long Beach, CA 90802 562-590-5126	Imperial, Inyo, Mono, Riverside, and San Bernardino counties
Marine Region 7 4665 Lampson Avenue #C Los Alamitos, CA 90720 562-342-7139	

Appendix D

Project Description Examples

Project Description Example - Community Chipping Program

The proposed action would involve chipping brush piles for private residences. The District would provide the chipping service to approximately 1,548 residents within the boundaries of the District. The proposed action would only involve the chipping of brush already cleared by residents and would not involve vegetation clearing or disposal activities. The vegetation to be chipped would be removed from around structures and stacked into piles at the edge of the residential properties. The chipped material would be left with the residents for their use.

Residents who choose to participate in the proposed action would pile their cuttings and slash within five feet of a road or driveway and in areas that would be accessible to the work crews. The brush would be stacked with ends facing the road. Brush material would not include palm, cactus, poison oak, rocks, trash, construction materials, or excessive dirt piles.

The proposed action would be conducted by a single work crew. The work crew would operate the chipper, chip the brush that is correctly piled, and leave the chipped material at the site of the original brush pile. Chipped material would not be hauled away as a part of the proposed action. The residents may use the chipped material on their property. The District would be responsible for notifying participants that chipped material could not be placed into wetlands or other waters of the United States.

The proposed action would occur in two six-month cycles that would coincide with the fire season. In each cycle, brush piles at a maximum of 744 properties would be chipped. The first six-month cycle would occur between January and June. This chipping cycle would be conducted in areas that have been determined by the District to have a higher wildfire hazard. The second six-month cycle would occur between July and December. This chipping cycle would be conducted in areas that have been determined by the District to have a lower wildfire hazard. The proposed action would not occur at properties that are located less than 1.5 miles from land administered by the U.S. Forest Service. Figure Y provides the locations where chipping could occur during the two cycles.

The chipper and other equipment would be staged on paved or graded surfaces, including the side of roadways or driveways. No ground disturbing activities would be associated with the proposed action.

The defensible space around structures would be maintained by residents after conclusion of the proposed action, per District ordinances. Though the District-provided chipping program would cease once the proposed action concludes, the District would continue to pursue additional grants.

Why This Is a Good Project Description

The subgrantee left the actual vegetation removal to the homeowners because the subdivision had parcels that were greater than one acre. The property owners were willing to remove vegetation but were fearful of open burning. Thus, chipping was used to dispose of the debris. Since FEMA was not funding the vegetation removal, the only work subject to NEPA was the chipping. The project schedule was very specific, allowing the reviewers to determine if the timing of the project would affect listed species. All staging areas planned on paved or graded surfaces.

Project Description Example - Mechanical and Chemical Removal of Vegetation

Mechanical Removal of Vegetation:

Arundo would be removed by a mechanical process of mowing. A hammer-flail mowing attachment would be mounted on a tractor with a mechanical arm that can reach into difficult mowing areas. Mowing would be used to knock down dense stands of *Arundo*. Native vegetation would be avoided as long as it is not completely intermixed with the *Arundo*. Mowing does not require below ground or bank excavations for removal of stems that could cause adverse effects to cultural resources. Mowed *Arundo* would then be transported off-site by a contractor and disposed of at a site approved by the City of Chowchilla. If the vegetation were to be left on site to decompose naturally over time, it would be a potential fire hazard, get in the way of and reduce the effectiveness of chemical application, be redistributed during flows and deposited off City property, and create displeasing aesthetics. Machinery would be operated in the slough. Vegetation would be removed mechanically between November and February and removal would take approximately two months. Equipment staging areas will be located on existing roads and empty lots adjacent to the project area owned by the City. No new roads or staging areas will be built.

Chemical Application

The herbicide glyphosate, approved by the U.S. Department of Agriculture (USDA) and commonly sold as Roundup or Rodeo, would be used for the proposed action. Rodeo has been approved for use in wetlands by the U.S. Environmental Protection Agency. Roundup dissolves easily in water, and should not be applied directly to any bodies of water. Therefore, Rodeo would be used near wet areas, if needed, and Roundup would be used in dry areas. Glyphosate would be applied by a licensed applicator following the manufacturer's specifications during implementation of the proposed action. It would be sprayed onto remaining stems and root areas of giant reed immediately after mowing and removal of the cut biomass. Additional chemical treatment would be applied quarterly for two years after the initial treatment, and thereafter, as needed. To prevent any effects on aquatic life or the spread of this chemical to surrounding areas, initial chemical application would take place when Ash Slough is dry, which is typically between November and February.

Why This Is a Good Project Description

The description states the specific species that will be removed. In this case it is *Arundo donax*, an invasive species. There are no plans to remove native species unless they are intermingled with *A. donax*. The disposal method is described in detail. It is also noted that machinery will be operated in the slough, which is important information for the reviewer as there may be impacts to wetlands or aquatic species. It is stated that the project will be carried out between November and February. This will allow the reviewers to determine potential impacts to endangered species. The name of the herbicide is stated in the project description so that impacts to aquatic life can be determined. The staging areas will be located on pavement, so that cultural resources will not be impacted by the construction of staging areas.

Project Description Example - Hand Removal of Vegetation

The Regents have applied to FEMA through the OES for a PDM grant to implement a vegetation management project. The Regents' PDM program grant application seeks FEMA funding to reduce future wildfire risks to the UC Observatories LO and appurtenant facilities. CDF has determined that project area lies in an area of high fire danger. The burn recurrence interval at and near to the LO, which was calculated using methodology described by FEMA, is 146 years. LO has not experienced a major fire within its 130-year history. Relatively long response times, a history of multiple simultaneous ignitions in the area, heavy growth of brushy fuels on inaccessible slopes, the scattered nature of buildings, and the absence of an onsite wildfire protection infrastructure all contribute to the difficulty of providing protection to LO. In addition, as California Highway 130 provides the only ingress and egress for the mountaintop facilities, it is likely that LO staff and visitors would be trapped on the summit. Therefore, action is needed to reduce wildfire risks to LO and appurtenant facilities.

The proposed action areas encompass approximately 27 acres that would be divided up into 37 treatment units and are analogous to the cultural resources APE. Treatment units would consist of 100-foot-wide defensible spaces around structures and "area treatments," which would be outside of these spaces around structures. Treatment unit boundaries would be flagged on the ground.

To create the 100-foot defensible zone surrounding structures, vegetation management techniques would consist of brush cutting and pruning canyon oaks, blue oaks, and foothill pines to a height of eight feet, removing dead materials, and mowing brush along roadways. Flammable ornamental vegetation such as rosemary and juniper shrubs would be removed and replaced with lower-hazard shrubs as identified by the California Fire-Safe Council. Cut vegetation would be disposed of by chipping, piling in low-hazard locations, and pile burning. Pile burning could occur from January through March.

"Area treatments" would be conducted in locations beyond the 100-foot-wide treatment units surrounding structures. Vegetation management techniques at "area treatment" would generally consist of thinning oak trees and mechanical mowing of brush. Treatment would include chipping material and leaving it on site, chipping and hauling materials off site, piling material in out-of-the-way, low-hazard locations, and covering piles and burning in situ during the wet season. Hand labor would be utilized to perform the proposed action. Two 10-person work crews would complete the proposed action between October and May. Crews would camp on site and use bathing and toilet facilities provided by LO. Equipment used by the hand crews would include handsaws, chainsaws, brush cutters, and hand pruners.

Cut materials would be handled in various ways, including chipped on site, then scattered or hauled away, depending on the volume; piled and left to decompose, if a suitable location would be available; or burned at designated locations between January and March. Staging areas would be located on paved roads adjacent to buildings.

The proposed action would consist of the selective removal of vegetation within 100 feet of structures and 10 feet of roadways, including access roads. The proposed action would not include treatment of private property, for which vegetation clearance is the responsibility of the property

owner. The distance between a structure and the corresponding property boundary varies from residence to residence, but on average in the action area this distance is approximately 60 feet. Therefore, the proposed action would involve creating a fuelbreak approximately 40 feet wide bordering residences and 10 feet wide bordering roadways on approximately 21.5 linear miles throughout COSCA lands. The proposed action would encompass approximately 83 acres.

Equipment staging areas would consist of public streets, parking lots, and other areas where the ground surface has already been disturbed. Thus, no vegetation clearing would occur for equipment staging, and these areas are not included in the estimate of the number of acres proposed for treatment.

Treatment of vegetation would occur approximately between April 1 and May 31, 2006, or April 1 and May 31, 2007, except in areas with coastal sage scrub (CSS), which would be treated between September 1, 2006, and February 1, 2007. Some equipment mobilization activities could take place outside of this period. VCFPD performs inspections for compliance with Ordinance 24 in June so all vegetation treatment associated with the proposed action would be concluded on or about June 1, 2007, except for areas of CSS. Every year for the last 10 years, CRPD has completed the required vegetation clearing in the action area. Therefore, most of the action area has already been treated in previously years.

In areas that have not been treated recently, CRPD would remove approximately 90 percent of the existing vegetation. In areas that have been treated recently, CRPD would remove approximately 20 percent of existing vegetation. The removal of vegetation would not apply to landmark or heritage trees, stands of protected species, ornamental shrubbery, or ornamental plants used as ground covers, provided that they do not form a means of rapidly transmitting a fire to any building. In particular, oak trees are protected by a City ordinance so they would not be removed. In addition, sycamore, black walnut, and California bay would not be targeted for removal. CRPD would also avoid areas where maritime succulent scrub (cacti) is the dominant vegetation community. In areas where CSS or chaparral is the dominant vegetation type, CRPD may not clear the entire area but instead may selectively thin the vegetation in a random, or mosaic, pattern. Vegetation less than 18 inches high would be maintained in areas sensitive to erosion, such as steep slopes, to protect the soil. Trees would be limbed up so that vertical clearances (ladder-fields) would be no less than 13.5 feet.

CRPD would utilize the services of CDF, the California Conservation Corps, in-house labor, and private contractors to implement the proposed action. Work crews would range in size from 2 to 12 people. Hand crews would utilize weed eaters, chain saws, and walk-behind tracked mowers to remove vegetation.

Once cut, vegetation would be left in place, disced into the soil using a tractor-driven device, or hauled off site to a permitted disposal facility, depending on slope, vegetation type, and soil conditions. The decision regarding disposition of cut vegetation would be made by the COSCA Supervising Park Ranger on a site-specific basis during project implementation.

CRPD would not conduct any vegetation removal activities within a 50-foot-wide buffer zone around riparian areas, wetlands, and ephemeral or perennial streams. This buffer zone would be

measured from the outermost portion of riparian or wetland vegetation—not from stream banks or other high-watermark boundaries.

Long-term maintenance of the action area would include annual inspections by CRPD to determine whether selective limbing of trees or other maintenance treatment would be required. CRPD plans on the action area not requiring a treatment similar to the proposed action for 20 years. Based on the annual inspections, a more frequent treatment schedule would be initiated if necessary.

Why This Is a Good Project Description

The project discusses the species of vegetation that will be impacted by the action and how they will be affected. The applicant is specific about the tools that will be used and how they will be used. For example, mechanical mowers will be used for grasses and hand tools will be used for trees and shrubs. The time period for project implementation was stated with regard to specific species. Camping facilities for work crews were described. All staging areas will be located in already paved or graded areas. Discussions about the Area of Potential Effect (APE) will not likely be included in the project description submitted with the application as FEMA's consultants will prepare the cultural resource reports; however, much of the information in this project description can be provided by applicants.

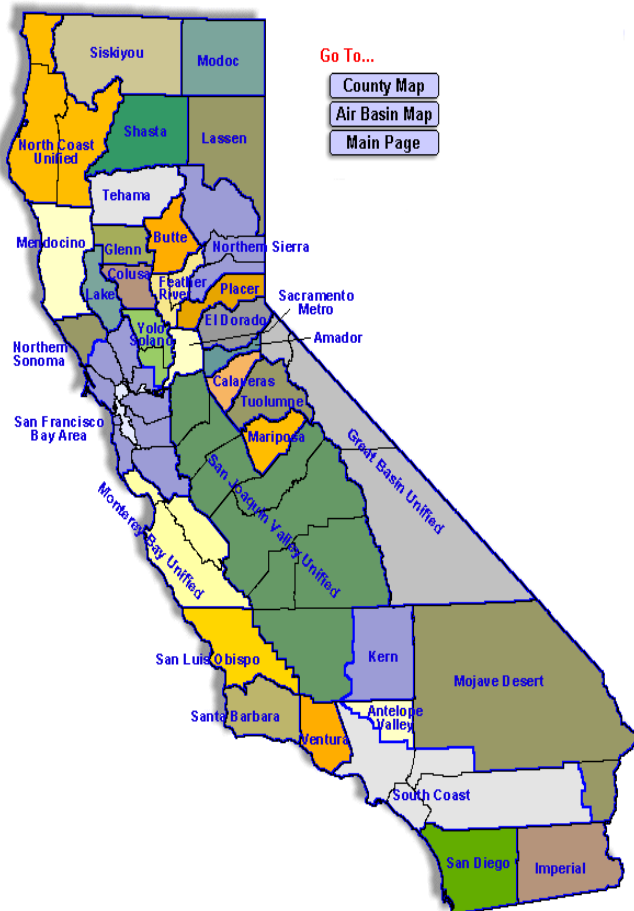
FEMA Oakland Regional Fuel Management Project

		Year 1												Year 2												Year 3												
Task		1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	
Pre-Planning	- - -																																					
Environmental Review																																						
Hire Consultants		-	-	-																																		
Prepare Reports					-		-			-		-				-	-			-	-		-	-			-	-		-	-		-	-		-	-	
Public Notice and Meetings				-			-			-		-				-			-			-		-				-		-		-		-		-		
Contract Process																																						
Design, Plan, Prepare Work Scopes		-	-	-	-									-	-	-											-	-										
RFP Process and Bids				-	-											-	-												-	-								
Prepare Contracts						-	-	-	-	-	-	-					-	-	-	-										-	-							
Award Contracts							-	-	-	-	-	-	-						-	-	-	-								-	-							
Fuels Mitigation Activities																																						
Vegetation Mitigation							-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
On-site Inspections								-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Followup Treatment									-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Project End of Year and Close-Out																																						
on Site Evaluations											-	-		-		-		-		-		-		-		-		-		-		-		-	-			
Formative Evaluation							-					-	-							-				-	-					-				-	-	-		
Summative Evaluation																																				-	-	
Audit												-	-											-	-											-	-	

Appendix E
California Air Quality Districts

Air Quality Districts

California Air Districts



Great Basin Unified APCD
157 Short Street #6
Bishop, CA 93514
760-872-8211

Northern Sierra AQMD
200 Litton Drive #320
Grass Valley, CA 95945
530-274-9360

Northern Sonoma County APCD
150 Matheson Street
Healdsburg, CA 95448
707-433-5911

Placer County APCD
11464 "B" Avenue
Auburn, CA 95603
530-889-7130

Sacramento Metro AQMD
777 12th Street 3rd Floor
Sacramento, CA 95824
916-874-4800

San Diego County APCD
9150 Chesapeake Drive
San Diego, CA 92123
858-650-4700

San Joaquin Valley APCD
1990 E. Gettysburg
Fresno, CA 93726
559-230-6000

San Luis Obispo County APCD
3433 Robert Court
San Luis Obispo, CA 93401
805-781-4147

Santa Barbara County APCD
26 Castilian Drive #B-23
Goleta, CA 93117
805-961-8800

Modesto Office – APCO
4230 Kiernan Avenue Suite 103
Modesto, CA 95356
209-557-6400

North Coast Unified AQMD
2300 Mrytke Avenue
Eureka, CA 95501
707-443-3093

Shasta County AQMD
1855 Placer Street #101
Redding, CA 96001
530-225-5674

Siskiyou County APCD
525 S. Foothill Drive
Yreka, CA 96097
530-841-4029

South Coast AQMD
21865 E. Copley Drive
Diamond Bar, CA 91765
909-396-2000

Tehama County APCD
1750 Walnut Street
Red Bluff, CA 96080
530-527-3717

Tuolumne County APCD
22365 Airport
Columbia, CA 95310
209-533-5693

Ventura County APCD
669 County Square Drive 2nd Fl.
Ventura, CA 93003
805-645-1400

Yolo-Solano AQMD
1947 Galileo Court #104
Davis, CA 95616
530-757-3650

Bakersfield – APCO
2700 "M" Street Suite 275
Bakersfield, CA 93301
661-326-6900